Motorized Etalon-Based Fiber Optic Tunable Filter

(patent pending)

Product Description

Based on a proprietary thin film cavity filter technology, Agiltron offers Fiber Optic Tunable Filters with central wavelengths of 1060nm, 1310nm, 1550nm and 2000nm. It is tunable continuously over a wide spectral range up to 80 nm. The wavelength tuning is actuated by driving a build-in precise stepper motor through interface of USB or RS232.

Agiltron's unique high reliability and low insertion loss design presents a most cost-effective solution for OEM applications from fiber optic networks to fiber sensing interrogation.

Features

- Compact and Low Cost
- Wide Tune Range
- Wide Wavelength Coverage
- Low IL and PDL

Applications

- DWDM networks
- Fiber Sensing
- ASE control
- Tunable Fiber Laser

Performance Specifications

Parameter	Min	Typical	Max	Unit
Center Wavelength	-	1060, 1310, 1550, 2000	-	nm
Tuning Range	-	60	80	nm
Tuning Resolution	-	0.1	-	nm
Tuning Speed	12	-	38	nm/s
Insertion Loss*	2	3	4	dB
Bandwidth @-3dB	-	1	1.2	nm
Bandwidth @-20dB	-	10	-	nm
Off-Band Suppression	-	30	-	dB
PDL (SM fiber only)	-	0.15	0.35	dB
PMD (SM fiber only)	-	-	0.5	ps
Extinction Ratio (PM fiber only)	18	23	-	dB
Return Loss	40	-	-	dB
Optical Power Handling (CW)	-	-	500	mW
Electrical Control Interface	-	USB or RS232	-	-
Operating Temperature	0	20	60	° C
Storage Temperature	-10	-	70	° C
Dimension	-	66 L x 73 W x 14 H	-	mm

Note: * Excluding connector loss.

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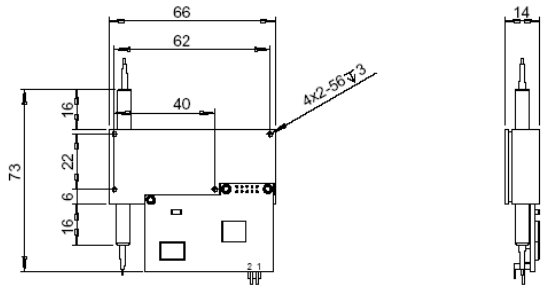
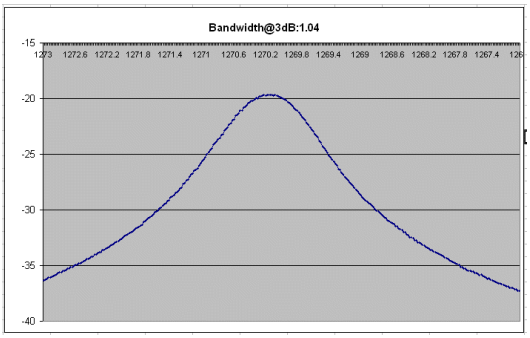
Mechanical Dimension (mm)



Typical Transmission Curve



Electrical Driving

Agiltron provides communication protocols and a computer control kit with USB or RS232 interface and Windows™ GUI.

Connector Pin Definition:

Power	Pin 1	GND
	Pin 2	5V

Ordering Information

FOTF-	0 1	☐	☐	2	☐	☐	☐	☐
	Type	Wavelength	Driving	Package	Fiber Type		Fiber Length	Connector
		2000nm = 2 1310nm = 3 1550nm = 5 1060nm = 6 Special = 0	USB = 1 RS232 = 2		SMF-28 = 1 HI1060 = 2 PM980 = 3 PM1550 = 4 Special = 0	Bare fiber =1 900um loose tube=3 Special=0	0.25m= 1 0.5m = 2 1.0 m= 3 Special =0	None = 1 FC/PC = 2 FC/APC = 3 SC/PC = 4 SC/APC = 5 ST/PC = 6 LC = 7 Special = 0

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